

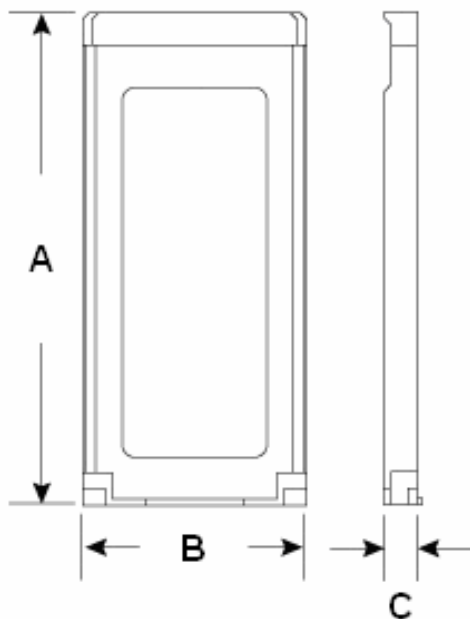
TS8G~32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Description

The ExpressCard™ SSD (Solid State Disk) is small in size, has a huge capacity and low power consumption making it perfect for use as a mobile storage solution in notebook computer with ExpressCard™ slot.

Outline



Dimensions

Side	Millimeters	Inches
A	75.00 ± 1.00	2.95 ± 0.04
B	34.00 ± 1.00	1.34 ± 0.04
C	5.00 ± 1.00	0.20 ± 0.04

Features

- RoHS compliant products
- High-speed USB 2.0 specification, True Plug and Play functionality
- Fully compatible with ExpressCard™ standards and Operating Systems (OS) that support the USB standard
- Non-volatile Flash Memory for outstanding data retention
- Built-in ECC (Error Correction Code) functionality and wear-leveling algorithm ensures highly reliable of data transfer
- Compatible with Windows Vista and supports ReadyBoost function
- Low Power Consumption
- Shock resistance

System Requirement

- Hardware: An available ExpressCard™ slot on desktop or notebook computer
- Operating System: Windows® 2000, Windows® XP, Windows® Vista, Mac™ OS 10.4 or later, and Linux™ Kernel 2.4 or later

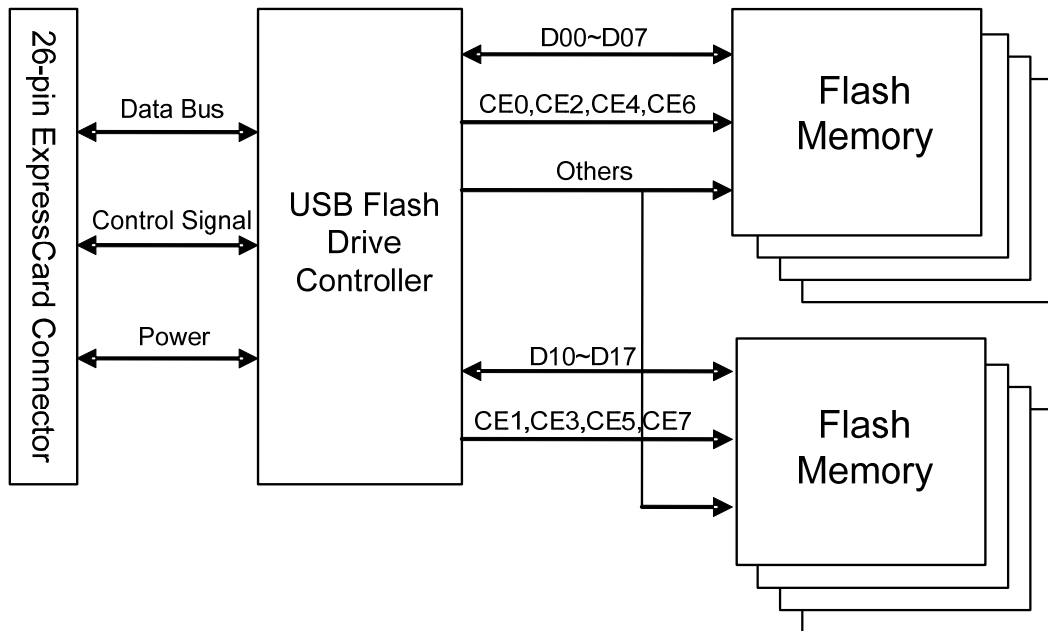
Order Information

Transcend P/N	Capacity
TS8GSSD34E-M	8GB
TS16GSSD34E-M	16GB
TS32GSSD34E-M	32GB

TS8G~32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Block Diagram



TS8G~32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Pinouts

Pin No.	Pin Name
01	GND
02	USB D-
03	USB D+
04	CPUSB
05	RSVD1
06	RSVD2
07	RSVD3
08	SMBCLK
09	SMBDATA
10	1.5V
11	WAKE
12	3.3VAUX
13	PERST
14	3.3V
15	3.3V
16	CLKREQ
17	CPPE
18	REFCLK-
19	REFCLK+
20	GND
21	PERN0
22	PERP0
23	GND
24	PETN0
25	PETP0
26	GND

Pin Identification

Symbol	Function
PETP0	
PETN0	
PERP0	PCI Express x1 interface
PERN0	
REFCLK+	
REFCLK-	PCI Express reference clock
PERST	PCI Express Reset
USB D+	
USB D-	USB serial data interface
SMBDATA	
SMBCLK	SMBus
CPPE	PCI Express interface presence detect
CLKREQ	Request that REFCLK be enabled
WAKE	Request that the host interface return to full operation and respond to PCI Express
CPUSB	USB interface presence detect
3.3V	Primary voltage source
3.3VAUX	Auxiliary voltage source
1.5V	Secondary voltage source
GND	Ground
RSVD1	
RSVD2	Reserve data pin
RSVD3	

TS8G~32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Specifications

Environment		
Capacity		8GB~32GB
Temperature	Operating	0 °C to 70 °C
	Non-Operating	-40 °C to 85 °C
Power Requirement	Voltage	DC 3.3V ± 10%
Power Consumption	Read Current	96.6 mA
	Write Current	104.8 mA
	Idle Current	43.8 mA
	Suspend Current	500 uA
Dimension	LxWxH	75mmx34mmx5mm
Weight		19 g (Max.)
Data Retention		10 years
MTBF		2,000,000 hours
Certificates		CE, FCC, BSMI

DC Characteristics

Symbol	Parameter	Min.	Max.	Unit
V_{IH_TTL}	TTL Input High Voltage	2	$0.3+V_{CC3}$	V
V_{IL_TTL}	TTL Input Low Voltage	-0.3	0.8	V
V_{OH_TTL}	TTL Output High Voltage	$0.9V_{CC3}$		V
V_{OL_TTL}	TTL Output Low Voltage		0.45	V
I_{OH_TTL}	TTL Output High Current	-4		mA
I_{OL_TTL}	TTL Output Low Current		4	mA
V_{IH_USB}	USB Input High Voltage for Low-/Full-Speed	2.0		V
V_{IL_USB}	USB Input Low Voltage for Low-/Full-Speed		0.8	V
$V_{I_USB_CM}$	Differential Common Mode Input Range for Low-/Full-Speed	0.8	2.5	V
$V_{I_USB_HSSQ}$	USB High-Speed squelch Input Detection Threshold	0.1	0.15	V
$V_{I_USB_HSDSC}$	USB High-Speed disconnect Input Detection Threshold	0.525	0.625	V
$V_{I_USB_HSCM}$	USB High-Speed Signaling	-0.05	0.5	V
V_{OH_USB}	USB Output High Voltage for Low-/Full-Speed	2.8	3.6	V
V_{OL_USB}	USB Output Low Voltage for Low-/Full-Speed		0.3	V
$V_{OH_USB_HS}$	USB Output High Voltage for High-Speed	0.36	0.44	V
$V_{OL_USB_HS}$	USB Output Low Voltage for High-Speed	-0.01	0.01	V
I_{OH_USB}	USB Output High Current for Low-/Full-Speed	-10		mA
I_{OL_USB}	USB Output Low Current for Low-/Full-Speed		10	mA
$I_{OH_USB_HS}$	USB Output High Current for High-Speed	-40		mA
$I_{OL_USB_HS}$	USB Output Low Current for High-Speed		40	mA

AC Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Unit
TP _{ILH}	Input Rising Delay	0.61 (0.8pF)	0.72 (2.4pF)	0.92 (4.8pF)	ns
TP _{IHL}	Input Falling Delay	0.88 (0.8pF)	1.03 (2.4pF)	1.24 (4.8pF)	ns
TP _{OLH}	Output Rising Delay	2.40 (10pF)	3.42 (30pF)	4.88 (60pF)	ns
TP _{OHL}	Output Falling Delay	2.61 (10pF)	3.62 (30pF)	5.03 (60pF)	ns
TR	Output Rising Delay	2.26 (10pF)	4.45 (30pF)	7.83 (60pF)	ns
TF	Output Falling Delay	1.90 (10pF)	3.63 (30pF)	6.23 (60pF)	ns

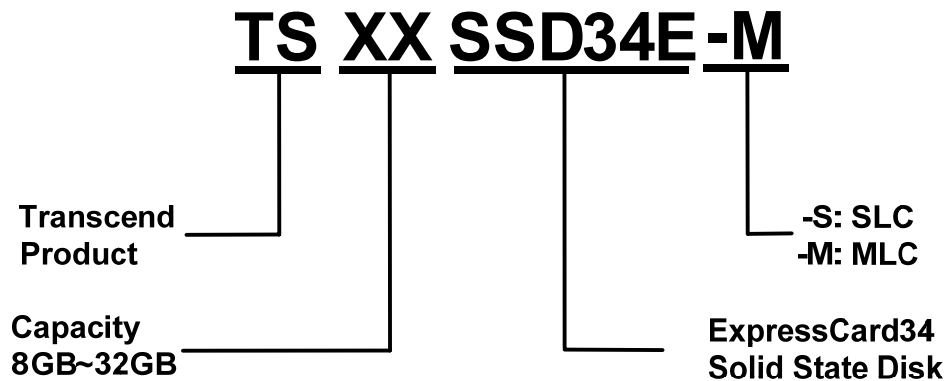
Absolute Maximum Ratings

Symbol	Parameter	Min.	Max.	Unit
T _{STORAGE}	Storage Temperature	-40	85	°C
T _A	Ambient Operating Temperature	0	75	°C
V _{CC3}	3.3V Supply Voltage	-0.3	3.6	V
V _{CC18}	1.8V Supply Voltage	-0.3	2	V
V _{in3.3}	3.3V Buffer Input Voltage	-0.3	3.6	V
V _{in3/5}	3.3V/5V Buffer Input Voltage	-0.3	5	V
V _{in1.8}	1.8V Buffer Input Voltage	-0.3	2	V

TS8G~32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Naming Rule



Above technical information is based on industry standard data and tested to be reliable. However, Transcend makes no warranty, either expressed or implied, as to its accuracy and assumes no liability in connection with the use of this product. Transcend reserves the right to make changes in specifications at any time without prior notice.

Transcend
Exceeding Your Expectations

TAIWAN

No.70, XingZhong Rd., NeiHu Dist., Taipei, Taiwan, R.O.C
TEL +886-2-2792-8000
Fax +886-2-2793-2222
E-mail: sales@transcend.com.tw
www.transcend.com.tw

USA

Los Angeles:

E-mail: sales@transcendusa.com

Maryland:

E-mail: sales_md@transcendusa.com
www.transcendusa.com

CHINA

E-mail: sales@transcendchina.com
www.transcendchina.com

GERMANY

E-mail: vertrieb@transcend.de
www.transcend.de

HONG KONG

E-mail: sales@transcend.com.hk
www.transcendchina.com

JAPAN

E-mail: sales@transcend.co.jp
www.transcend.jp

THE NETHERLANDS

E-mail: sales@transcend.nl
www.transcend.nl

United Kingdom

E-mail: sales@transcend-uk.com
www.transcend-uk.com